REPORT DOCUMENTATION PAGE

1. Report Security Classification: Unclassified
2. Security Classification Authority: N/A
3. Declassification/Downgrading Schedule: N/A
4. Distribution/Availability of Report: DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.

5. Name of Performing Organization: Office of the Provost

6. Office Symbol: 1

7. Address: NAVAL WAR COLLEGE 686 CUSHING ROAD NEWPORT, RI 02841-1207

8. Title (Include Security Classification): Geopolitical Dilemmas of China’s Growing Thirst for Oil

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12. Page Count: 34

13. Supplementary Notation: A paper submitted to the Provost, Naval War College, for the _Jerome E. Levy Economic Geography and World Order Prize_ essay competition. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.

14. Ten key words that relate to your paper: China, Economics, Geography, Politics, Strategy, Trade, Geopolitics, Energy, and Pollution.

15. Abstract:

The dilemmas of China’s growing thirst for oil are numerous. The increasing use of oil is inevitable and the trend cannot be controlled by China’s leaders. For China to grow economically and for its people to prosper, oil consumption must increase. If China’s leaders do not encourage economic growth and the Chinese people do not prosper, the political ramifications will be adverse. There is already growing political unrest and widespread demonstrations, some violent, by laid-off workers—to be competitive in the world market, former state owned enterprises are shedding workers. There are severe environmental problems, pollution is ruining the quality of life in many affected areas. The growing consumption of oil in the transportation sector will worsen pollution, especially in the large cities. There are geopolitical ramifications: China will have to reconsider its relations with Middle Eastern countries that supply ever increasing amounts of their oil. China must strive for economic and military stability in the region. If China dedicates resources to upgrade its military to protect the sealanes and other transportation routes for oil, it will take valuable assets away from needed improvements to infrastructure and will add to tensions regionally and with the United States. Regional players and the United States are valuable trading partners. A military conflict will result in a disruption of oil supply for China, which will cause a shock to China’s economy that would be very unpopular politically. As China opens their economy, political power is decentralizing, shifting to those centers that are prospering from world trade. This is threatening the authoritarian government.

16. Distribution / Availability of Abstract: Unclassified Same As Rpt DTIC Users

17. Abstract Security Classification: Unclassified

18. Name of Responsible Individual: Office of the Provost, Naval War College

19. Telephone: 841-3589

Security Classification of This Page: UNCLASSIFIED

20041115 048
Geopolitical Dilemmas of China's Growing Thirst for Oil

Map 1
Map of China Indicating Major Provinces and Oil Fields

Source: China OGP, 1999, vol. 2

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Geopolitical Dilemmas of China’s Growing Thirst for Oil

... China policy is driven by a clear concern about increasing energy vulnerability which has led to decisions which at times prioritize geopolitical and strategic considerations over economic and efficiency concerns.²

International Institute for Strategic Studies

INTRODUCTION

In this paper, I will explore the dilemmas inherent in China’s thirst for oil. I will give a background of China’s oil industry since the 1960s. Finally, I will discuss the China’s economic, political, and military strategies for energy security. As can be seen in the above chart, around 1993, China began consuming more oil than it produced.³ This was a watershed event for China and the world. It will have consequences for global energy markets, the environment, and international security. China’s oil supply situation is precarious. China has proven oil reserves of 24 billion barrels, which constitutes just 2.3 percent of the world total for a country with 22 percent of the world’s population. Estimates of China’s potential reserves are highly

² Energy Information Administration website, China County Brief: http://www.eia.doc.gov/emeu/cabs/china.html
³ Ibid.
speculative. This has resulted in a massive dilemma for China’s rulers putting them in a situation that requires choices among equally undesirable alternatives. If China does not modernize and open its economy there will be unfavorable economic and political consequences. As China modernizes and opens its economy there are many unfavorable results.

The wide distribution of media throughout China, including the rise of the Internet and expansion of access to foreign-sourced programming for television is challenging the hegemony of the symbols and messages of the Chinese Communist Party, providing alternative images of consumerism, conspicuous consumption, and self-fulfillment. As media outlets expand, awareness is likely to grow regarding disparities within Chinese society and between PRC citizens and people living in Hong Kong, Taiwan, the United States, and other rich societies. The material demands of the Chinese population are likely to intensify.

With a broad sampling of Chinese now watching television, advertising can be targeted at middle class Chinese who might desire lavish vacations, air-conditioned homes, and private cars—all of which drive up the demand for energy exponentially. The Chinese central government has fought back against this bombardment of foreign images by delivering competing messages of socialist values, but ultimately, Beijing faces a near impossible task to monitor and control the symbols being circulated at the local level throughout China. The net result could easily be a society increasingly unwilling to forego consumer goods and unlikely to conserve in its energy consumption. This fact will make the imposition of curbs on energy use more costly politically and give the Chinese leadership pause in taking adventurous military actions that could result in a cut-off in energy imports.

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Will China become a threat to international security? China’s military modernization program, the hegemony and values of the Chinese Communist Party (CCP), and the tendency of great powers to act boldly make China a potential security threat. Will China’s internal problems, non-imperialistic tradition, and comparatively limited ability to project military power ensure that China will behave more cooperatively in world affairs? How China reacts to consuming more oil than it produces could decide whether oil is a source of tension or a means by which China integrates into the global economy.\textsuperscript{6} For China energy issues include coal, natural gas, hydroelectric, nuclear, and the environment. Natural gas may be a significant issue in ten to fifteen years. Near term, the bulk of total Chinese energy demand will continue to come from industrial activities. I will concentrate on the oil problem.

Foreboding is the increasing share of total energy use by China’s transportation sector. In fact, at a per capita GDP growth rate of 5 percent, energy demand in the transportation sector is projected to triple by 2015, fueling a sharp increase in oil and petroleum product use.\textsuperscript{7} China is increasingly reliant on oil from the Middle East. China has proceeded cautiously in seeking to balance its geopolitical and economic interests in the Gulf. Yet, China’s arms transfers to Gulf Countries and its positions on Gulf issues may have a negative impact on regional security.\textsuperscript{8}

Projections for domestic production of oil have been described as “extreme hype.” The Chinese oil sector has underperformed expectations, both internally and externally. Past projections of its crude oil production and the number of giant oil fields have been grossly

overestimated, particularly offshore. As stated previously, China has proven oil reserves of 24 billion barrels, 2.3 percent of the world total. Finding rates, size of reserves and the path of production have fallen far behind initial claims. Downstream, the pace of new refinery construction, particularly that involving foreign capital, has lagged far behind the original speculative timetables. There have been claims of liberalization on almost a monthly basis for several years, but the claims have proved false.9

![Figure 1.2: Domestic Supply and Net Imports of Oil](image)

Oil demand has continued to climb in China with increasing motorization and switching away from coal and traditional, noncommercial fuels in the residential and service sectors. Estimates are that by 2010 China’s oil use will be 18 to 24 percent of Asian oil demand and from 5 to 7 percent of total world demand.10 Oil demand in China is projected to grow by 3.3 percent per year on average, from 5 million barrels per day in 2001 to 10.9 million barrels per day in

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2025. Most of the additional oil will have to be imported. The primary source of these oil imports was the Middle East at 52.9 percent, with the remainder coming from Asia Pacific, 36.3 percent, West Africa, 8.5 percent, and other regions, 2.3 percent. Of the 11.96 million tons (Mt) imported from the Middle East, 5.56 Mt came from Oman, 3.77 Mt from Yemen, and 2.31 Mt from Iran. The major Asia Pacific sources were Indonesia, 6.3 Mt and Vietnam, 1.01 Mt.

In 2001, vehicle ownership in China was 13 vehicles per 1,000 persons, compared to 779 per 1,000 in the United States. China's accession to the World Trade Organization in 2001 is expected to increase competition in the automobile sector, stimulating passenger car sales and demand for transportation fuels. Car prices are expected to fall by around 15 percent as a result of increased competition from imports. China's road system is still failing to keep up with

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growth in vehicle use, however, and its major cities already face gridlock. In addition to poor road infrastructure, China has a lack of parking facilities. The government carried out massive infrastructure development in 2002, involving 251 highway projects covering 16,104 miles, at a cost of $4.1 billion. The government plans for all counties in undeveloped western China to have access to a highway by the end of the year.

With strong growth in automobile use throughout the country, the Chinese government has also become increasingly concerned about air quality, particularly in urban areas. In preparation for the Beijing Olympics in 2008, the Chinese government is planning to phase out leaded gasoline and has pledged to replace 1.8 million outdated vehicles.

**BACKGROUND**

Crude-oil production in China has increased dramatically since the early 1960s, when petroleum was discovered at Daqing, in Heilongjiang province. Offshore oil fields have also been developed in the Bo Hai Gulf of the Yellow Sea and along the continental shelf as far south as Vietnam. China was the world's third largest consumer of petroleum products in 2002, following the United States and Japan, with total demand of 5.26 million barrels per day (bbl/d). Since Japan's demand is stagnant and China's is still growing rapidly, 2003 will likely be the year that China surpasses Japan in petroleum consumption. China's oil demand is projected by EIA to reach 10.9 million bbl/d by 2025, with net imports of 7.5 million bbl/d, making it a major factor in the world oil market.¹⁶

**Restructuring of the Petroleum Industry**

China's petroleum industry has undergone major changes in recent years. In 1998, the Chinese government reorganized most state owned oil and gas assets into two vertically

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¹⁶ Energy Information Administration, China Country Brief: [http://www.eia.doe.gov/emeu/cabs/china.html](http://www.eia.doe.gov/emeu/cabs/china.html)
integrated firms—the China National Petroleum Corporation (CNPC) and the China Petrochemical Corporation (Sinopec). Before the restructuring, CNPC had been engaged mainly in oil and gas exploration and production, while Sinopec had been engaged in refining and distribution. This reorganization created two regionally focused firms, CNPC in the north and west, and Sinopec in the south, though CNPC is still tilted toward crude oil production and Sinopec toward refining. Other major state sector firms in China include the China National Offshore Oil Corporation (CNOOC), which handles offshore exploration and production and accounts for more than 10% of China's domestic crude production, and China National Star Petroleum, a new company which was created in 1997. Regulatory oversight of the industry now is the responsibility of the State Energy Administration (SEA), which was created in early 2003.\(^\text{17}\)

The intention of the restructuring was to make these state firms similar to vertically integrated corporate entities elsewhere. In connection with this process, the firms have been spinning off or eliminating many unprofitable ancillary activities such as running housing units, hospitals, and other services near company facilities. Massive layoffs also have been undertaken, as like many other Chinese SOEs, they were severely overstaffed.

**Stock Offerings**

The three largest Chinese oil and gas firms - Sinopec, CNPC, and CNOOC - all have successfully carried out initial public offerings (IPOs) of stock between 2000 and 2002, bringing in billions of dollars in foreign capital.\(^\text{18}\) CNPC separated out most of its high quality assets into a subsidiary called PetroChina in early 2000, and carried out its IPO of a minority interest on both the Hong Kong and New York stock exchanges in April 2000. The IPO raised over $3

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\(^{17}\) Energy Information Administration, China Country Brief: [http://www.eia.doe.gov/emeu/cabs/china.html](http://www.eia.doe.gov/emeu/cabs/china.html)

\(^{18}\) Ibid.
billion, with BP the largest purchaser at 20% of the shares offered. Sinopec carried out its IPO in New York and Hong Kong in October 2000, raising about $3.5 billion. Like the PetroChina IPO, only a minority stake of 15% was offered. About $2 billion of this amount was purchased by the three global super-majors - ExxonMobil, BP, and Shell. CNOOC held its IPO of a 27.5% stake in February 2001, after an earlier attempt in September 1999 was canceled. Shell bought a large block of shares valued at around $200 million.\(^\text{19}\) In 2002, Chinese oil companies began to look at separating out some of their business units into subsidiaries. CNPC has set up subsidiaries for drilling services and geological survey work, and plans to eventually spin them off through international IPOs. CNOOC also has created an oilfield services unit—China Oilfield Service, Ltd. (COSL)—which was listed on the Hong Kong stock exchange in November 2002.

All of these stock offerings involved only minority stakes. They have not given the foreign investors a major voice in corporate governance. The Chinese government still holds majority stakes in all three firms, and the foreign investors have not received seats on their boards of directors. Analysts have generally seen these investments as attempts by the supermajors to gain a foothold in China, which will necessarily involve partnerships with the Chinese majors.\(^\text{20}\)

Even with the opening to foreign investment envisioned in China's commitments for membership in the WTO, it is still likely that almost all major oil and gas projects in China will involve one of the Chinese majors. The Chinese government stipulated in July 2001 that only CNPC and Sinopec will be allowed to open new retail filling stations prior to fulfillment of China's market-opening commitment in 2004. This is seen as an attempt to strengthen their

\(^{19}\) Energy Information Administration, China Country Brief: [http://www.eia.doe.gov/emeu/cabs/china.html](http://www.eia.doe.gov/emeu/cabs/china.html)

\(^{20}\) Ibid.
control of retail sales of petroleum products and ensure that foreign firms will have to partner with one or the other of the Chinese majors to enter the retail market, even after 2004. All three of the global supermajors, BP, ExxonMobil, and Shell, are planning to enter the Chinese retail market in partnership with CNPC, Sinopec, or both.

**Sources of Oil**

Most Chinese oil production capacity, close to 90%, is located onshore. One field alone, Daqing in northeastern China, accounts for about 1.0 million bbl/d of China's production, out of a total crude oil production of around 3.3 million bbl/d.\(^ {21} \) Daqing is a mature field, however, having begun production in 1963, and production fell by nearly 3% in 2002. At China's second-largest producing field, Liaohe in northeastern China, CNPC has solicited proposals from potential foreign partners to help it enhance recovery rates and extend production, though no contracts have yet been signed.

In December 2000, regulatory changes were announced which will remove some of the barriers to foreign firms forming partnerships with Chinese oil majors. Government priorities focus on stabilizing production in the eastern regions of the country at current levels, increasing production in new fields in the West, and developing the infrastructure required to deliver western oil and gas to consumers in the East. Offshore development also is a high priority. Chinese officials have said that they expect production in Xinjiang to reach 1 million bbl/d by 2008, but that seems ambitious, given that transportation of that oil to consumers in the East remains a major obstacle.\(^ {22} \)

Improvement in Sino-Vietnamese relations has opened the way for oil and gas exploration in the Beibu Gulf (known in Vietnam as the Gulf of Tonkin). China and Vietnam

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\(^ {21} \) Energy Information Administration, China Country Brief: [http://www.eia.doe.gov/emeu/cabs/china.html](http://www.eia.doe.gov/emeu/cabs/china.html)

\(^ {22} \) Ibid.
signed an agreement in December 2000 that settled their outstanding disputes over sovereignty and economic rights in offshore areas near their border. China has been acquiring interests in exploration and production abroad. CNPC has acquired oil concessions in Kazakhstan, Venezuela, Sudan, Iraq, Iran, and Peru, and Azerbaijan. Sinopec also has begun seeking to purchase overseas upstream assets. The most significant deal thus far is CNPC's acquisition of a 60% stake in the Kazakh oil firm Aktobemunaigaz, which came with a pledge to invest significantly in the company's future development over the next twenty years.

There has been discussion of a possible oil pipeline from Kazakhstan to China, but CNPC has said that it would only be considered if reserves were sufficient and it was economical, which looks doubtful.\textsuperscript{23} CNPC's position in Kazakhstan suffered a major blow in May 2003, when the consortium partners in the Kashagan oilfield in the Caspian exercised their rights to block the sale of a 16.7% interest in the project from BG to CNPC. The Greater Nile Petroleum Operating Company (GNPOC), the Sudanese oil project in which CNPC owns a stake, began exports in August 1999. CNOOC also has purchased an upstream equity stake in the small Malacca Strait oilfield in Indonesia.

Russia's Far East is seen as a potential source of Chinese crude oil imports. The Russian and Chinese governments have been holding regular discussions on the feasibility of pipelines to make such exports possible. One proposed plan is a pipeline, which would carry 600,000 bbl/d of crude oil from Anagarsk in Russia to join the existing Chinese pipeline network at Daqing.\textsuperscript{24} Yukos Oil of Russia and CNPC signed a memorandum of understanding in June 2003 for sales of oil via the pipeline, contingent on the pipeline being built. An alternative plan, proposed by Russian pipeline operator Transneft, would take Russian crude from both West Siberia and East

\textsuperscript{23} Energy Information Administration, China Country Brief: \url{http://www.eia.doe.gov/emeu/cabs/china.html}
\textsuperscript{24} Ibid.
Siberia via a 1 million bbl/d pipeline to an export terminal at the Pacific coast port of Nakhodka. China presumably would be one of the major consumers of oil from such a project, but it would also give Russia increased access to the Japanese, South Korean, and other East Asian markets. Both options, or possibly both, eventually if oil reserves are sufficient, are still officially under consideration, according to recent Russian government statements. Japan has been actively promoting the Nakhodka option, offering to assist with financing, but the line to Daqing appears to be more likely to be built in the near future.  

**Downstream Development**

Downstream infrastructure development in China centers primarily on upgrading existing refineries rather than building new ones, due to overcapacity. In the late 1990s, the Chinese government shut down 110 small refineries, which generally made inferior quality petroleum products. Dozens of other small refineries owned by provincial and local governments have been merged into CNPC and Sinopec. There is a lack of adequate refining capacity suitable for heavier Middle Eastern crude oil.

Chinese officials have spoken of their intention to build a national strategic petroleum reserve, and Chinese officials announced a policy decision in February 2003 to support the creation of a strategic petroleum reserve, and have reportedly been studying several options for the development of storage capacity. In the meantime, anecdotal evidence has suggested that China may have built up its petroleum stocks earlier this year in anticipation of possible war in Iraq.

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26 Ibid.
Environmental Issues

According to a report by the World Bank, 16 of the world’s 20 most polluted cities are in China. Sulfur dioxide and soot caused by coal combustion are two major air pollutants, resulting in the formation of acid rain, which now falls on about 30 percent of China’s total land area. Ninety percent of the country’s sulfur dioxide emissions are attributed to coal-fired boilers, and the government is focusing regulation on sulfur dioxide emissions from power generation and large industrial facilities.27

China is also moving toward adopting Euro 2 emissions standards for light-duty and heavy-duty vehicles. Beijing will be the first Chinese city to implement the new national standards, requiring that all new light-duty and heavy-duty vehicles sold in Beijing after January 1, 2003, comply with the Euro 2 standards. In an additional effort to reduce air pollution in the city, the municipal government is ordering city vehicles to convert to liquefied petroleum gas and natural gas.28 As mentioned previously, the Chinese government is planning to phase out leaded gasoline in preparation for the 2008 Beijing Olympics.

It is transportation demand that is driving China’s thirst for oil. Neither natural gas nor coal nor nuclear nor hydroelectric power can solve China’s rapidly growing need for transportation fuel. It is oil that is required and oil is likely to remain the predominant energy source globally for the transportation sector well into the 21st century. While alternative engine systems might play a limited role in dampening demand for diesel and gasoline fuel in industrialized countries during the next decade or so, they are unlikely to represent a major share of the market until 2020 or later. Some pilot programs are being conducted to develop nonhydrocarbon-based energy technologies in certain industries, including transportation sectors.

28 Ibid.
in China. But it is unlikely that China will be able to cope with rising dependence on traditional fossil fuel resources in the coming years by leapfrogging to alternative energy technologies.\(^{29}\) The huge scale of growing greenhouse gas emissions from developing countries such as China, India, Brazil, and Indonesia casts doubts on the effectiveness of the Kyoto accords to reduce greenhouse gas emissions if these countries aren't included. Cleaner, more efficient emerging technologies in the automotive and power sectors could eventually help fill the gap that the Kyoto agreement leaves behind in reducing overall levels of global emissions from key developing nations. Emerging technologies in the field of transportation and power generation could play a critical role in reducing CO2 emissions in emerging economies where major infrastructure investments remain to be made. While relatively inexpensive energy prices may seem to obviate the need for government-support of emerging energy technologies such as cost-effective fuel cell generators or hybrid vehicle automobiles, environmental considerations may justify public support for research on innovative technology.

**Refining Problem**

Middle Eastern oil can help quench China's thirst for oil, but, ironically, China's oil sector may not be able to benefit directly from access to large volumes of oil from Iraq and Iran. Aged and unsophisticated oil refining equipment throughout most of China means that China is limited in the quality of oil it can process. China cannot refine large amounts of most of the lower quality supplies that are produced in Persian Gulf countries such as Iraq, Iran, Saudi Arabia, and Kuwait. By 2005, China is only likely to be able to process little more than one million b/d of this lower quality Persian Gulf oil, though it will be able to import higher-quality

supplies from Abu Dhabi, Yemen, or Oman.\textsuperscript{30} This commercial constraint will reduce at least the economic incentive for China to pursue client-state oil for arms alliances with any of the major Middle East producers unless large-scale investments can be made in its domestic refining sector.

High production and pipeline transport costs for oil shipments from neighboring Kazakhstan mean that economic and commercial factors alone can't justify major pipeline projects across China. International oil prices must be above $14 to $15 a barrel for a prolonged period. While growth in Chinese energy use in the transportation sector will likely be highest, demand for energy in both the residential and commercial sectors, as well as the industrial sector, may nearly double by 2015.\textsuperscript{31}

The future of China is perhaps the most pressing question in what is becoming the world's most important region. The possibility of a "China threat," therefore, has become a hotly debated topic. . . . Simply stated, the "China threat" argument maintains that an increasingly powerful China is likely to destabilize regional security in the near future. . . . The anti-threat position begins with the argument that China might not be able to develop into a "threat" even if it wanted to.\textsuperscript{32} Denny Roy

\textbf{STRATEGIC ASPECTS OF ENERGY SECURITY}

Over the past few decades, China has had the luxury of neutrality toward oil geopolitics. Oil prices inside China were fixed by the state central planners and had no relation to world price levels. Internal supplies fairly evenly matched domestic requirements. China's economy was sheltered from the volatile international oil scene, and therefore, its leaders could be indifferent


\textsuperscript{31} Ibid.

to conflicts in the Middle East or elsewhere. Oil disruptions neither hurt nor helped China substantially.33

By comparison, the U.S. economy, as a major consumer and importer of oil, was vulnerable to rapid, sustained swings in international oil prices, dictating foreign policies that would promote stability in international oil markets. The U.S. Navy defended Persian Gulf supplies while U.S. policymakers worked to remove political and economic barriers to oil development outside the volatile region. The Soviet Union was a major oil exporter, and its economy benefited directly from rising oil prices. Its interests in oil markets were diametrically opposed to those of the United States. Soviet oil interests so diverged from America's that policy theorists in the 1980s suggested that the U.S. would benefit from events that could drive oil prices lower to hurt the Soviet treasury.

Since the Cold War ended, the debate in the West, especially in the U.S. about the nature and implications of China’s foreign policy has sharpened. The disintegration of the Soviet Union, coupled with the robust growth of the Chinese economy, have prompted a reexamination of China’s role within as well as outside the Asia-Pacific region. Some have argued that China’s military modernization program, the hegemony and values of the Chinese Communist Party (CCP), and the tendency of great powers to act boldly make China a potential security threat. Others have maintained that China’s internal problems, non-imperialistic tradition, and comparatively limited ability to project military power will ensure that China will behave more cooperatively in world affairs.34

The Chinese government’s fear of dependence on foreign oil lies behind its energy security activities. The government’s unease with its status as a net oil importer has its origins in

34 Ibid.
China’s unhappy experience with Soviet participation in China’s oil sector in the 1950s and China’s use of its oil exports to Japan to influence Japanese foreign policy in the 1970s.\textsuperscript{35} Soviet advisers had a major impact on the development of China’s oil industry in the 1950s. Their departure following the Sino-Soviet split in 1960 created severe energy shortages and left China dependent on the Soviet Union, its new adversary, for more than 50 percent of its critical refined oil products!

After China became an oil exporter in the 1970s, the Chinese government emulated the Soviet Union in its use of oil exports as a foreign policy tool. China sold oil to Japan at below-market prices in order to dampen Japanese enthusiasm for investment in Siberian oil and gas development projects. The Chinese leadership was afraid that the development of these resources would strengthen the transportation and communications infrastructure in Siberia and enhance the Soviet Union’s ability to attack northeastern China, the country’s industrial heartland and region of greatest strategic vulnerability.\textsuperscript{36} These experiences made China’s leaders acutely aware that dependence on foreign oil can bring foreign economic and political pressures that can threaten national security. The Chinese government’s fears of foreign oil dependency and the possible exploitation of this vulnerability have resurfaced now that China is once again a net oil importer.\textsuperscript{37}

The implications of China’s shift to a world energy importer are significant. Over the next ten to twenty years, China will have to participate in international energy trade on a substantial and sustained basis, form energy supply and transportation alliances, and make security and environmental choices about fulfilling its future burgeoning energy needs. These alliances and trade and policy options will be constrained by the unwieldy organization of

\textsuperscript{35} Erica Streckers Downs, \textit{China’s Quest for Energy Security} (Santa Monica: RAND, 2000), p. 43.
\textsuperscript{36} Ibid.
\textsuperscript{37} Ibid, p. 44.
China's oil and gas industry and by the aged and inefficient refining and distribution infrastructure that exists in China today.\textsuperscript{38}

\textbf{China-U.S. Relations}

Unlike the U.S., China does not have the military capabilities to protect its energy security once it becomes dependent on foreign supplies. China lacks air and naval power projection necessary to control international sea-lanes or reopen vital waterways such as the Strait of Hormuz in the Persian Gulf. China cannot stage a military intervention in a distant locale such as the Persian Gulf. Given its limited military budgets and current capabilities, China's military is unlikely to attain such capacity in the next several decades. It is 30 to 50 years away from the type of comprehensive, across-the-board technological modernization of its naval and air forces that could challenge American power in the sea-lanes.\textsuperscript{39} Its ballistic, anti-ship, and cruise missile capability—while able to threaten energy trade and commercial shipping in Asian waters, among other targets—is not sufficient to defend fully its own incoming shipments of oil and other goods from retaliation in response to its own aggressive acts.

Chinese analysts view the U.S. as a major threat to China’s energy security.\textsuperscript{40} Many Chinese analysts perceive the U.S. to be uncomfortable with China’s rising power and are suspicious that the U.S. seeks to constrain China’s emergence as a potential rival. They cite as evidence American criticism of China’s human rights record, arms sales to Taiwan, the deployment of two aircraft carrier battle groups to the waters around Taiwan during China’s 1996 missile tests, the revision of the U.S.-Japan security guidelines, the bombing of the Chinese Embassy in Belgrade, the passage of the Taiwan Security Enhancement Act by the U.S. House of

\textsuperscript{39} Ibid.
\textsuperscript{40} Erica Strecker Downs, \textit{China's Quest for Energy Security} (Santa Monica: RAND, 2000), p. 44.
Representatives, and the possible deployment of Theater Missile Defense and National Missile Defense systems. Of particular concern to Chinese analysts is that there is no state (or group of states) powerful enough to balance against the U.S. They regard China as being especially vulnerable to American power in a world in which the U.S. is the sole superpower.\footnote{Erica Strecker Downs, \textit{China's Quest for Energy Security} (Santa Monica: RAND, 2000), p. 44.}

China’s recent shift from a net oil exporter to a net oil importer means that energy security is another issue the U.S. could exploit to pressure China. The Chinese government is uncomfortable with the fact that the U.S. Navy dominates the sea-lanes stretching from the Persian Gulf to the South China Sea through which the bulk of China’s oil supply must pass. Especially the security of transport corridors, chiefly the Malacca Strait, through which all Middle Eastern oil reaches its Asian customers.

This concern is legitimate. It may lie behind China’s recent policy reversal in ratifying the UN Convention on Law of the Sea (UNCLOS). The Convention’s guarantees of safe passage have great value in this respect. In an almost perfect illustration of how policy interconnections work in a globalized world, the ratification also makes immensely more difficult any Chinese move to deny safe passage for oil and other trade through the South China Sea. This relieves to some extent a situation that Japan and Korea fear.

There is a concern that if Sino-U.S. relations sour, the U.S. could use its superior military power to disrupt China’s oil supply. An article in the Chinese international affairs journal *World Economic and Politics* contends that the U.S. could use its control of Middle East oil to “check” China.43 Another Chinese commentary goes even further and argues that the U.S. has already implemented an “energy containment” policy against China. This policy’s objective, according to the article, is to weaken China by gaining control of the energy resources in western China and blocking China’s access to oil imports.44 The U.S. currently is not pursuing such a policy, but Chinese analysts clearly consider the interruption of its oil supply as a possible future containment measure.

Although not explicitly mentioned by Chinese analysts, it is also possible that the U.S. could apply oil sanctions against China to punish behavior it deems undesirable on a variety of issues ranging from human rights abuses to arms sales. Economic sanctions have been an important tool of U.S. foreign policy in the post-Cold War era. Given China’s vulnerability to

U.S. economic pressure and relative lack of allies, the threat and imposition of oil sanctions could appeal to the U.S.\textsuperscript{45}

It is the final status of Taiwan that looms largest as a dangerously volatile issue between China, neighboring Asian nations, and the U.S. The importance of this issue to China, which maintains that Taiwan is an integral part of its country, cannot be underestimated as Beijing has threatened to respond to any declaration of independence on the part of Taiwan with military action. While the U.S. has explicitly acknowledged Taiwan’s territorial relationship as a part of the People’s Republic of China, the implementation of that status remains a delicate matter between the U.S. and China—one that, if mishandled, could lead to direct military conflict.

During the Cold War years, the U.S.-China relationship was handled only at the highest level of power. Now increasingly, subgroups of social groups, special interests, and civil society are providing a richer texture to China’s relations with the U.S. In the longer run, these underlying layers will have a deep influence on the development of U.S.-Chinese relations.\textsuperscript{46} China’s economic reforms have added new interactions between the heads of each society’s major corporations. China’s external relations are also molded by the relationships between networks of Chinese entrepreneurs, often connected through extended family ties. These business networks extend from the Chinese mainland throughout the Chinese Diaspora. On still another level, China’s relationships with the outside world will be colored by the relationships between representatives of and/or advocates for dissidents, political exiles, religious groups,

\textsuperscript{45} Erica Strecker Downs, \textit{China’s Quest for Energy Security} (Santa Monica: RAND, 2000), p. 43.

\textsuperscript{46} Baker Institute Study, No. 11, \textit{China and Long-range Asia Energy Security},
http://www.bakerinstitute.org/Pubs/workingpapers/claes/executive_summary.html#energy%20demand
ethnic minorities, and other disaffected groups scattered throughout China but that have external supporters in the U.S. and elsewhere.  

American business interests in China are diverse and sometimes contradictory. In addition, the situation of certain suppressed religious and ethnic groups remains a major thorn in China's side in its interactions with the international community and media. The human rights issues raised by these groups throw a huge amount of unpredictability into China's future development and its relationship with the U.S. and other nations. U.S. public opinion of China is influenced by the fact that China remains an authoritarian nation. China's sensitivity to matters of territorial integrity, no matter how understandable from a historical perspective, represent a constant source of tension. But those political analysts that call on the U.S. to act quickly to contain China also exaggerate its current and future strength.

China may strive to upgrade naval, missile, and other military capabilities, but it is far from dedicating the resources to become a plausible military rival to the U.S. In this important manner, it differs sharply from the Soviet Union in the 1940s and 1950s. In the late 1940s, the Soviet Union, with its immense human and financial resources, its impressive land force, and its contiguous border to Europe, represented a direct and immediate threat to the U.S. and its allies. China today possesses no such parity, even from challenging U.S. supremacy in East Asia. A second key difference between the Soviet Union and China today is the evidence of expansionist intent. The Soviet Union, by force of arms, created a large series of subject states on its borders. China possesses no comparable empire and holds few alliances, nor can it boast rival institutional challengers such as the Warsaw Pact or COMECON.  

Rather, China seeks

48 Ibid.
membership in international bodies where the U.S. wields considerable power, such as the International Monetary Fund and the World Trade Organization.

China poses no ideological threat to the U.S. China's nominal communist system no longer serves as an item for "export," and its current path of economic reform puts it more closely on course with the international status quo than with revolutionary zest. Unlike the Soviet Union, China is likely to compete with the U.S. within an international system largely created and dominated by the U.S. and U.S.-led institutions. All this means that the U.S. can embark in a systematic manner on a policy of constructive engagement with China and can take a wait and see approach to containment policy with regards to China—a luxury that was not available to U.S. leaders in the 1940s where the Soviet Union was concerned. 49

Neither China's leadership nor its oil and gas industry institutions are likely to be strong diplomatic or commercial substitutes for military means in defending access to international energy supplies. Given the central government budget deficits, the capital shortage faced by most industries in China, including the energy industry, and the very high social, political, and economic costs of implementing a full-scale reorganization of the state energy sector, it will be extremely difficult for Beijing to be a strong international player in the strategic oil and gas arena. 50

China's oil and gas companies are expected to be constrained by financial pressures and the need to raise profitability, limiting the scale of geopolitically-driven foreign oil field investments they can take on behalf of the central government. As the central government's ability to offer tangible economic benefits and commercial privileges to the energy sector companies weakens, the commitment of those companies to China's national foreign policy

50 Ibid.
agenda is likely to weaken as well. Increasingly, China’s oil and gas giants, such as CNPC and Sinopec, are seeing the state’s influence erode in guaranteeing markets, domestic prices, and capital for infrastructure investments. Provincial, municipal, and local actors are encroaching on CNPC and Sinopec’s turf and causing energy pricing and marketing competition through import channels and locally privatized oil sector businesses. Ongoing liberalization and restructuring in the energy sector is likely to accelerate this process.51

The central government’s decreasing influence on the domestic energy sector—as well as its military limitations—raises serious doubts about concerns that China’s rising dependence on foreign oil supplies will cause geopolitical instability in Asia and drive regional arms races. While it is true that China will increasingly compete for similar energy supplies with Japan, South Korea, and India, the possibility that this will lead to increased tensions and conflict does not have to be a foregone conclusion. In formulating China’s future foreign policy in light of changes in its energy supply balance, China’s leadership will have to take a hard look at the possible outcomes from competition and conflict over energy resources and compare them to the potential benefits of cooperation on energy matters.

China’s increasing dependence on the same energy sources as the U.S., Japan, and other industrialized economies means that its strategic interests could actually blend more closely with Western interests in the Middle East.52 A rising reliance on Persian Gulf oil and gas imports imply that China will suffer the same negative consequences as the U.S., Japan, and Europe if military equipment it or others pass to regimes such as those in Iraq or Iran is used to interdict the free flow of oil from the Middle East or elsewhere. A breakdown in order in Afghanistan or Central Asia will have similarly dire consequences for China’s chances of tapping Caspian

52 Ibid.
energy supplies. However, it remains to be seen if China's energy interests will be enough to alter China's military's perceptions of its own more general strategic interests, particularly on the issue of weapons nonproliferation. China may continue to perceive a benefit from deep U.S. involvement with concerns in regions other than Asia.53

China's energy security activities are aimed, in part, to reduce the vulnerability of China's oil supply to American power. China's interest and investment in the development of Central Asian and Russian energy resources can largely be explained by the Chinese perception that these regions are less vulnerable to U.S. power than the Persian Gulf and the sea-lanes connecting it to the South China Sea. China's "oil diplomacy" in the Middle East is an effort to ensure continued access to oil from a U.S.-dominated region that provides China with the bulk of its oil imports. These activities reflect Beijing's larger strategy of attempting to reduce its vulnerability to American power through the development of a broad network of secure bilateral relationships, particularly with its neighbors. The internationalization of CNPC is a way for China to gain a foothold in the world oil market, which is dominated by companies from the U.S., Japan and Europe. The Chinese government is pursuing a number of other measures to reduce the amount of oil it has to import and to increase China's ability to manage supply disruptions, including those created by the U.S.

The U.S. is a competitor for Central Asian energy resources, but its ability to threaten China's oil supply from this region is limited.54 CNPC defeated several major American oil companies in acquiring development rights to Kazakhstan's Uzen and Akyubinsk oil fields. Geography dictates that Central Asia's energy cooperation with China is likely to be greater than its energy cooperation with the U.S. The lack of a strong U.S. military presence in Central Asia

54 Erica Strecker Downs, China's Quest for Energy Security (Santa Monica: RAND, 2000), p. 43.
explains China’s enthusiasm for the proposed pipeline between China and Kazakhstan. The major attraction of this pipeline is that it would provide China with an oil supply route that avoids the sea-lanes dominated by the U.S. Navy and passes through regions where China’s land power has the advantage. Many industry analysts say this pipeline is not economically feasible.\(^{55}\) China’s interest in the Siberian energy resources can similarly be explained by their location in a region that is not dominated by U.S. military power. But this solution leaves China open to disruptions in Sino-Russian relations.

The Chinese government wishes to reduce the vulnerability of its Middle Eastern oil supply to American power. Chinese analysts are afraid that Western countries may seek to limit China’s access to Middle East oil out of fear that there is not enough to go around.\(^{56}\) The Chinese government believes that the cultivation of strong bilateral relationships with oil-producing countries in the Middle East can help China secure the oil resources it needs from the region. China’s efforts to establish closer ties with the Middle East have economic, political, and military dimensions.

The corporate ambitions of CNPC, which are shared by the Chinese leadership, are also relevant to the Chinese government’s efforts to decrease the vulnerability of its oil supply to American power. CNPC, not satisfied with being merely a state-owned enterprise, seeks to become a successful multinational corporation like Royal Dutch/Shell and Exxon-Mobil. Participation in the international oil market is essential to the achievement of this goal. CNPC’s foreign investments give company officials the opportunity to prove they can do business overseas, learn the skills necessary to operate in a foreign environment, and gain exposure to new technology and management practices. The Chinese leadership supports CNPC’s ambition


\(^{56}\) Ibid.
to become a world-class oil company. The internationalization of CNPC is not only part of the Chinese government's plan to create internationally competitive firms but also its strategy to achieve energy security. There appears to be a perception among Chinese energy planners and analysts that equity holdings in overseas oil fields increase China's control over that imported oil. However, most of the oil produced by CNPC in places like Venezuela, Sudan, and Kazakhstan will not physically enter China because of logistical difficulties and transportation costs!\(^7\)

China is attempting to reduce the amount of oil it has to import through increased domestic production. The involvement of foreign oil companies is essential to this goal because they possess the capital, technology, and large-project management skills that the Chinese companies lack and are necessary for exploration in promising but geologically complex areas. The Chinese government seeks to reduce its oil imports through the development of China's natural gas industry. Although natural gas is generally regarded as a substitute for coal, it could be substituted for oil in the transportation sector. Natural-gas-driven vehicles are already in use in several cities in China and may spread to others. If China establishes a strategic petroleum reserve, it could deter short-term disruptions and be a key measure in reducing China's energy vulnerability.\(^8\)

China's vast energy resources lie far from the most populous, fastest-growing regions; an inconvenient circumstance that stretches inadequate domestic energy-delivery infrastructure. Imported oil has become an attractive alternative in precisely those parts of China, which need it most and have had the greatest access to it as the economy opened. China has made considerable efforts to exploit its domestic resources, but growth has overwhelmed them and led—two

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\(^7\) Erica Strecker Downs, *China's Quest for Energy Security* (Santa Monica: RAND, 2000), p. 43.  
\(^8\) Ibid.
decades after the reforms began—to rising net oil imports. Continued dependence on imports is now irreversible unless, new, economically exploitable, reserves of domestic oil can be found.\textsuperscript{59} Certain policy steps augmented and reinforced these trends, perhaps unintentionally. Turning the economy outward was bound to affect the energy sector profoundly. Insufficient investment in transport and energy infrastructure, plus relative slowness in shedding the sector’s command-economy characteristics, inhibited the availability of domestic oil and raised its real cost. This cautious approach to reform in a sector considered “strategic” hastened China’s loss of self-sufficiency in oil by sending confused price signals.\textsuperscript{60} The Chinese energy industry might have developed faster if it had been plunged directly into the high-price international environment that has prevailed since the late 1970s. The low-price environment of 1998 and early 1999 reinforced domestic pressures to import and dealt a severe blow to hopes for exploiting the relatively high-cost Tarim basin as an alternative to growing net imports.

The reform that fostered the Chinese boom of the past 20 years, has for the most part not affected the energy sector. Despite much churning, scant results have come forth. Little evidence appears of a unified domestic energy strategy.\textsuperscript{61} Coherent price signals work their way only slowly into the system. The state-owned enterprises grow larger, more powerful and more unwieldy rather than more efficient. Regulation is in disarray. China has difficulty articulating how it weights the basic elements of energy policy: development of indigenous oil and gas, diversification of energy sources and imported energy supplies, energy conservation and energy efficiency, and the environmental friendly components of all these elements. So the government is slow and awkward in translating them into official programs. Many policies co-exist, sometimes as complements, sometimes in competition, but their interrelationships have poor

\textsuperscript{60} Ibid.
\textsuperscript{61} Ibid, p. 8.
definition. There are several strategies rather than a single one, and many actions, which may or
may not reflect policy. Policy drift persists despite a great deal of apparent activity.

Energy issues have clearly taken a higher priority in Chinese foreign policy. This
represents a constraint as much as an opportunity because the drive for reliable energy supplies,
now a national imperative, increasingly limits the use of energy policy as a means to other policy
objectives. Every evidence points to China’s rising awareness that its diplomatic goals with
respect to energy, primarily oil and gas, must aim toward participation in the global energy
system in a way that maximizes domestic energy security.62

Other Relations

Economically, China is pursuing a strategy of “two imports and one export” to strengthen
its energy ties to the Middle East.63 The “two imports” refer to oil imports and capital to invest
in the development of China’s oil industry. Chinese oil companies have signed long-supply
contracts with Middle Eastern countries. The “one export” refers to China’s investment in oil
exploration and development projects in the Middle East. The Chinese government hopes that
the development of strong Sino-Middle Eastern energy ties will help China secure the oil that it
needs from the region.

Politically, China is seeking to enhance the security of its oil imports from the Middle
East by increasing its diplomacy in the region. The Chinese government appears to believe that
strong bilateral political relationships can produce greater supply security during crises, despite
historical evidence to the contrary.64 In 1999, several of China’s top leaders visited Algeria,
Israel, Jordan, Morocco, Saudi Arabia, and Syria—high level visits to strengthen China’s ties to
states in a region where the U.S. has many allies and China has few.

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63 Erica Streecker Downs, China’s Quest for Energy Security (Santa Monica: RAND, 2000), p. 45.
64 Ibid.
Militarily, it is possible that China could use its arms sales to the Middle East to foster closer ties to oil-producing nations and possibly to decrease its oil import bill. China has a history of weapons exports to Iran, Iraq, Libya, and Saudi Arabia. Weapons sales run counter to the U.S. policy of non-proliferation, so continued arms sales could strain Sino-U.S. relations.

China's move away from self-reliance in its petroleum and natural gas sectors will enhance its interests in free navigation in Asian sea-lanes in which the U.S. Navy plays a major role as defender. Ironically, this change for China will coincide with a greater U.S. reliance on energy supplies from its own Western hemisphere, potentially raising burden-sharing issues with Asian nations about the expense of the U.S. military role in the Persian Gulf. It remains to be seen whether China's leadership can publicly acknowledge and accept the reality of the benefits it might incur from the U.S. naval presence in East Asia and the Middle East. The regime still criticizes Japan for its reliance on "third parties" and calls for the U.S. to remove its military from Asia on the grounds that the Cold War threat has been resolved. To some extent, China's economy could be shielded from the negative consequences of a temporary cut-off in oil supplies as a result of a major disruption by its heavy use of coal in vital industries. But it would still have to implement uncomfortable—and potentially destabilizing—major consumer sacrifices.65

China sees itself both as an emerging gas market and as a land bridge for regional gas distribution. A natural gas-oriented energy strategy could provide an incentive to China to give serious consideration on how to improve relations with neighboring countries.66 But, in order for joint energy linkages and large-scale, cross-border energy projects to succeed, distrust surrounding China's long-term geopolitical goals will have to be overcome. Already, China has pursued border discussions with Vietnam through diplomatic initiatives that could lead to joint

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66 Ibid.
exploitation of oil and gas resources in border areas in the Beibu Gulf. However, border disputes in the South China Sea remain an area of strain. China has also sought Japanese and South Korean financial support in constructing transportation infrastructure for natural gas shipments from Russia and Central Asia to China, Japan, and South Korea. Cooperation on the latter would, however, require a resolution of tensions in the Korean peninsula. Past actions of the North Korean government, the presence of large military units on the North-South border, a ballistic missile capability, the potential development of a nuclear threat from North Korea, and the dire economic situation in the North are all reasons for worry with regard to the Korean peninsula. Energy issues represent only a very minor factor in the equation.  

As China has shifted to a non-revolutionary stance in international relations, seeking to establish a "socialist market economy" and pursuing peaceful regional cooperation, new, more positive public attitudes toward China have emerged in some quarters—though dark suspicions remain in others. Objective evidence of the former trend can be seen in changing patterns of diplomatic recognition, shifts in public rhetoric, and rising trade and investment figures. Privately, however, the intellectual elites of Southeast Asia continue to voice suspicions of long-term Chinese intentions as suggested by aggressive actions in the Spratley Islands and strategic flirtation with Burma. Such attitudes find their roots not in anti-Communist sentiment but in long-standing historic suspicions of Chinese imperial intentions.  

A variety of historical experiences have shaped attitudes toward China among the region's populations and elite. Vietnam's perspective is the result of a long, often contentious, association with China, which included a thousand years of Chinese occupation. In Indonesia, more recent history reinforced antagonism against China. The close relationship between the

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68 Ibid.
People's Republic of China and the now defunct Indonesian Communist Party and the alleged role of China in the failed Communist/Sukarno putsch of September 1965 have colored Indonesian-Chinese relations for decades. Sino-Japanese relations are also influenced by a long, bitter history of war and, more recently, regional and international economic competition. Japanese elites remain deeply suspicious of China's long-term intentions and worry about Chinese initiatives to disrupt free navigation in Asian sea-lanes.69

CONCLUSION

The dilemmas of China's growing thirst for oil are numerous. Some say that the increasing use of oil in China is inevitable and the trend cannot be controlled by China's leaders. For China to grow economically and for its people to prosper, oil consumption must increase. If China's leaders do not encourage economic growth and the Chinese people do not prosper, the political ramifications will be adverse. There is already growing political unrest and widespread demonstrations, some violent, by laid off workers. To be competitive in the world market, former state owned enterprises are shedding workers. China has great environmental problems, pollution is ruining the quality of life in many affected areas. The growing consumption of oil in the transportation sector will worsen pollution, especially in the large cities.

In addition to political and economic consequences, there are geopolitical ramifications for China. China will have to reconsider its relations to Middle Eastern countries that supply ever increasing amounts of their oil. China must strive for economic and military stability in the region. If China dedicates resources to upgrade its military to protect the sealanes and other transportation routes for oil, it will take valuable assets away from needed improvements to infrastructure and will add to tensions regionally and with the U.S. Regional players and the U.S

are valuable trading partners. A military conflict will result in a disruption of oil supply for China, which will cause a shock to China’s economy that would be very unpopular politically.

As China opens their economy, political power is decentralizing, shifting to those centers that are prospering from world trade. This is threatening the authoritarian government. Hopefully, China will embrace economic, political, and military cooperation with the nations of the world as they make the difficult decisions so that as a great power China will increase the stability of international relations rather than causing destabilization.
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